

CLAIM LISTING:

1. (Amended) A lithographic projection apparatus comprising:
a radiation system to supply a projection beam of electromagnetic radiation having a wavelength of 250nm or less;
a support structure adapted to support patterning structure which can be used to pattern the projection beam according to a desired pattern;
a substrate table to hold a substrate;
a projection system to project the patterned beam onto a target portion of the substrate; and
a gas supply constructed and arranged to supply a purge gas to a space in said apparatus, said space containing an optical component, wherein said purge gas comprises an oxygen-containing species selected from water, nitrogen oxide and oxygen-containing hydrocarbons;

wherein said purge gas comprises an inert gas, and wherein the total amount of oxygen-containing species present in said purge gas is from 1 ppb to 10 ppm by volume.

2. (Cancelled)

3. (Amended) An apparatus as in ~~claim 2~~ claim 1, wherein the inert gas comprises helium, argon, nitrogen or a mixture thereof.

4. (Original) An apparatus according to claim 1, wherein said oxygen-containing species is selected from water, nitrogen oxide, alcohols, alkanones and ethers.

5. (Original) An apparatus according to claim 1, wherein said space is substantially evacuated, and wherein a total partial pressure of the oxygen-containing species in said space is from 1×10^{-4} Pa to 1 Pa.

6. (Original) An apparatus according to claim 1, which apparatus further comprises a further supply of electromagnetic radiation having a wavelength of 250nm or less and arranged to supply such radiation onto at least one of said optical component and said patterning structure.

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~~7.~~ (Original) An apparatus according to claim 1, which apparatus further comprises a separate cleaning unit to clean patterning structure comprising a space, a radiation source for supplying and directing into said space radiation having wavelengths of 250 nm or less and a gas supply for supplying a purge gas into said space, wherein said purge gas comprises an oxygen-containing species selected from water, nitrogen oxide and oxygen-containing hydrocarbons.

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~~8.~~ (Amended) A device manufacturing method comprising:
projecting a patterned beam of radiation having a wavelength of 250nm or less onto a target portion of a layer of radiation-sensitive material on a substrate, and
cleaning an optical component for use in the apparatus by irradiating a space containing said optical component with radiation having a wavelength of less than 250 nm in the presence of an oxygen-containing species selected from water, nitrogen oxide and oxygen-containing hydrocarbons;

wherein the total amount of oxygen-containing species present is from 1 ppb to 10 ppm by volume.

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~~9.~~ (Amended) A method according to ~~claim 7~~ ⁷ claim 8, further comprising the step of supplying to said space containing said optical component and/or said patterning structure a purge gas comprising an inert gas, preferably helium, argon, nitrogen or a mixture thereof, ~~and wherein the total amount of oxygen-containing species present in said purge gas is from 1 ppb to 10 ppm by volume.~~

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~~10.~~ (Amended) A method according to ~~claim 7~~ ⁷ claim 8, further comprising supplying to said space containing said optical component and/or said patterning structure a purge gas comprising oxygen-containing species selected from water, nitrogen oxide, alcohols, alkanones and ethers.

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~~11.~~ (Amended) A method according to ~~claim 7~~ ⁷ claim 8, wherein said cleaning step is carried out separately from said step of projecting the patterned beam of radiation.

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~~12.~~ (Amended) A device manufactured according to the method of ~~claim 7~~ ⁷ claim 8.

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~~13.~~ (Amended) A cleaning unit for cleaning contaminated objects comprising a space, a radiation source for supplying and directing into said space radiation having wavelengths of 250 nm or less and a gas supply for supplying a purge gas into said space, wherein said purge gas comprises an oxygen-containing species selected from water, nitrogen oxide and oxygen-containing hydrocarbons and wherein the total amount of oxygen-containing species present in said purge gas is from 1 ppb to 10 ppm by volume.

¹³
~~14.~~ (Amended) A method of cleaning contaminated objects comprising:
directing radiation having a wavelength of 250 nm or less onto an object in a space,
and
supplying a purge gas to said space, wherein the purge gas comprises an oxygen-containing species selected from water, nitrogen oxide and oxygen-containing hydrocarbons;
and
wherein the total amount of oxygen-containing species present in said purge gas is from 1 ppb to 10 ppm by volume.